

Mr. Tom Leydic  
Heartland Steel, Inc.  
445 West Industrial Drive  
Terre Haute, Indiana 47802

Re: Significant Source Modification No:  
167-11837-00120

Dear Mr. Leydic:

Heartland Steel, Inc. has been issued a MSOP in anticipation of receiving a Part 70 Permit Application (Pursuant to the transition procedures). An application to modify the source was received on January 25, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

- (a) Seven (7) space heating units, with a maximum capacity of 6.6 million BTU per hour each, fired on either natural gas or propane.
- (b) Miscellaneous space heating with an estimated combined maximum capacity of 3 million BTU per hour, fired on either natural gas or propane.
- (c) Two (2) diesel fired emergency generators, with a maximum input capacity of 69.7 gallons per hour (output rating 1447 Bhp).
- (d) Pickle Line Scale Breaker, controlled by a Wheelabrator baghouse (model 120 Series 6P), and exhausting to stack 007.

Additionally, the following modifications have been made to the current permit.

In addition, the address of the Heartland Steel, Inc. is being changed from 70 West Harlan Drive to 445 West Industrial Drive because Industrial Drive has now been extended to the Heartland Steel property. They have requested this change.

The Maximum Hourly production rates for several processes were incorrect in the initial permit. These are being updated to: Pickle Line - 800,000 pounds of steel per hour (from 289,665 pounds of steel per hour); Galvanizing Line - 140,000 pounds of steel per hour (from 96,160 pounds of steel per hour); and Cold Reversing Mill - 400,000 pounds of steel per hour (from 237,000 pounds of steel per hour).

The use of the Galvanizing Line as a Continuous Annealing line has been considered and is being added as an alternate operation method.

The propane use limitation, which was determined to not be needed to avoid the PSD requirements, is being removed.

Heartland Steel, Inc.  
Terre Haute, Indiana  
Permit Reviewer: Rob Harmon

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The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM and VCAPC receive an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (812) 462-3433 and ask for Rob Harmon or extension 14.

Sincerely,

George M. Needham, Director  
Vigo County Air Pollution Control

Attachments  
RKH

cc: Winter Bottum - IDEM-OAM  
Mindy Hahn - IDEM-OAM, Permit Branch

**PART 70 SIGNIFICANT SOURCE MODIFICATION  
OFFICE OF AIR MANAGEMENT  
and  
VIGO COUNTY AIR POLLUTION CONTROL**

**Heartland Steel, Inc.  
445 West Industrial Drive  
Terre Haute, Indiana 47802**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 167-11837-00120	
Issued by: George M. Needham, Director Vigo County Air Pollution Control	Issuance Date:  November 2, 2000

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## SECTION A

## SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a stationary steel processing plant.

Responsible Official:	Tom Leydic
Source Address:	445 West Industrial Drive, Terre Haute, Indiana 47802
Mailing Address:	445 West Industrial Drive, Terre Haute, Indiana 47802
Phone Number:	299-8866, ext 1164 (Darren Tiger, source contact)
SIC Code:	3316
County Location:	Vigo County
County Status:	Maintenance attainment for Sulfur Dioxide Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) Seven (7) space heating units, with a maximum capacity of 6.6 million BTU per hour each, fired on either natural gas or propane.
- (b) Miscellaneous space heating with an estimated combined maximum capacity of 3 million BTU per hour, fired on either natural gas or propane.
- (c) Two (2) diesel fired emergency generators, with a maximum input capacity of 69.7 gallons per hour (output rating 1447 Bhp).
- (d) Pickle Line Scale Breaker, controlled by a Wheelabrator baghouse (model 120 Series 6P), and exhausting to stack 007.

### A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## **SECTION B                      GENERAL CONSTRUCTION CONDITIONS**

### **B.1      Permit No Defense [IC 13]**

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2      Definitions [326 IAC 2-7-1]**

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

### **B.3      Effective Date of the Permit [IC13-15-5-3]**

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

### **B.4      Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]**

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.5      Modification to Permit [326 IAC 2]**

Notwithstanding the Section B Condition entitled "Significant Source Modification", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### **B.6      Significant Source Modification [326 IAC 2-7-10.5(h)]**

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section and Vigo County Air Pollution Control (VCAPC), verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM and VCAPC if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Director of the Vigo County Air Pollution Control and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition

covered by the Significant Source Modification will be included in the Title V draft.

- (2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.
- (3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

**B.7 Local Agency Requirement**

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This permit shall also be considered to be the local permit, a separate application and approval is not required.

## SECTION C GENERAL OPERATION CONDITIONS

### C.1 Nested Source [326 IAC 2-2]

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This source does not fall into one of the 28 listed source categories for PSD purposes. However, pursuant to an EPA determination, the units at the source which fall into a two-digit SIC Code of 33 are also considered to be a nested source which would be one of the 28 categories (Iron and Steel Mill Plants). The operations which fall into that category are: Batch Annealing (SIC 3398), Temper Mill (SIC 3398), and Reversing Cold Mill (SIC 3316).

### C.2 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

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- (a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, on the attached Certification Form, with each submittal.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

### C.3 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) after issuance of this approval, including the following information on each facility:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807



- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM and VCAPC, upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. IDEM, OAM and VCAPC, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

**C.4 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]**

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- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

- (b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

**C.5 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.6 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**Testing Requirements [326 IAC 2-7-6(1)]**

**C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]**

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- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM and VCAPC.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM and VCAPC within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM and VCAPC, if the source submits to IDEM, OAM and VCAPC, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

**C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

**C.9 Pressure Gauge Specifications**

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Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

**C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]  
[326 IAC 1-6]**

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- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
  - (1) This condition;
  - (2) The Compliance Determination Requirements in Section D of this approval;
  - (3) The Compliance Monitoring Requirements in Section D of this approval;
  - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and
  - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM and VCAPC upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :
    - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and
    - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
  - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;
  - (3) An automatic measurement was taken when the process was not operating; or
  - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of

326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]  
[326 IAC 2-7-6]

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM and VCAPC, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM and VCAPC shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and VCAPC within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and VCAPC reserve the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and VCAPC that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM and VCAPC may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and VCAPC may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM and VCAPC, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or VCAPC make a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or VCAPC within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this approval;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control  
103 South 3<sup>rd</sup> Street  
Terre Haute, Indiana 47807

- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM and VCAPC, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (a) Seven (7) space heating units, with a maximum capacity of 6.6 million BTU per hour each, fired on either natural gas or propane.
- (b) Miscellaneous space heating with an estimated combined maximum capacity of 3 million BTU per hour, fired on either natural gas or propane.
- (c) Two (2) diesel fired emergency generators, with a maximum input capacity of 69.7 gallons per hour (output rating 1447 Bhp).
- (d) Pickle Line Scale Breaker, controlled by a Wheelabrator baghouse (model 120 Series 6P), and exhausting to stack 007.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

## Descriptive Changes

### D.1.1 Descriptive Changes to MSOP 167-V039-00120, issued July 19, 1999

- (a) The address of the Heartland Steel, Inc. is being changed from 70 West Harlan Drive to 445 West Industrial Drive because Industrial Drive has now been extended to the Heartland Steel property.
- (b) The Maximum Hourly production rates for several processes were incorrect in the initial permit. These are being updated to: Pickle Line - 800,000 pounds of steel per hour (from 289,665 pounds of steel per hour); Galvanizing Line - 140,000 pounds of steel per hour (from 96,160 pounds of steel per hour); and Cold Reversing Mill - 400,000 pounds of steel per hour (from 237,000 pounds of steel per hour). These capacity changes affect the particulate matter emission limitations established by 326 IAC 6-3. The calculation methods are presented in Conditions D.1.1, and D.4.1 of the previous MSOP.
- (c) The use of the Galvanizing Line as a Continuous Annealing line has been considered and is being added as a alternate operation method.
- (d) The propane use limitation, which was determined to not be needed to avoid the PSD requirements, is being removed. The associated reporting form is also no longer required to be submitted as before and the recordkeeping and reporting requirements that were solely based on this limitation have been removed.

## Emission Limitations and Standards

### D.1.2 Propane Use Limitation [326 IAC 2-2]

Combined propane use for all combustion units is no longer limited. The Permittee is a minor source with regard to 326 IAC 2-2 (Prevention of Significant Deterioration) without any limitation. This Condition also repeals the limitations contained in MSOP 167-V039-00120, issued July 19, 1999 [Conditions D.1.2, D.2.2, and D.4.3].

### D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.1.4 Particulate Matter (PM)**

The baghouse for PM control shall be in operation at all times when the pickle line scale breaker is in operation.

### **D.1.5 Visible Emissions Notations**

- (a) Daily visible emission notations of the pickle line scale breaker stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

### **D.1.6 Parametric Monitoring**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the pickle line scale breaker, at least once daily when the pickle line scale breaker is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 3.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM and VCAPC, and shall be calibrated at least once every six (6) months.

### **D.1.7 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the scale breaking operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

### **D.1.8 Broken or Failed Bag Detection**

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.



Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

#### **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [ 326 IAC 2-6.1-5(a)(2)]**

##### **D.1.9 Record Keeping Requirements**

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- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of daily visible emission notations of the pickle line scale breaker stack exhaust.
- (b) To document compliance with Condition D.1.6, the Permittee shall maintain the following:
  - (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
    - (A) Inlet and outlet differential static pressure; and
    - (B) Cleaning cycle: frequency and differential pressure.
  - (2) Documentation of all response steps implemented, per event .
  - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
  - (4) Quality Assurance/Quality Control (QA/QC) procedures.
  - (5) Operator standard operating procedures (SOP).
  - (6) Manufacturer's specifications or its equivalent.
  - (7) Equipment "troubleshooting" contingency plan.
  - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.7, the Permittee shall maintain records of the results of the inspections required under Condition D.1.7.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
and  
VIGO COUNTY AIR POLLUTION CONTROL**

**PART 70 SOURCE MODIFICATION  
CERTIFICATION**

Source Name: Heartland Steel, Inc.  
Source Address: 445 West Industrial Drive, Terre Haute, Indiana 47802  
Mailing Address: 445 West Industrial Drive, Terre Haute, Indiana 47802  
Source Modification No.: SSM 167-11837-00120

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.**

Please check what document is being certified:

- 9 Test Result (specify) \_\_\_\_\_  
9 Report (specify) \_\_\_\_\_  
9 Notification (specify) \_\_\_\_\_  
9 Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Vigo County Air Pollution Control**

Addendum to the  
Technical Support Document for Part 70 Operating Permit

<b>Source Name:</b>	<b>Heartland Steel, Inc.</b>
<b>Source Location:</b>	<b>445 West Industrial Drive, Terre Haute, Indiana, 47802</b>
<b>County:</b>	<b>Vigo County</b>
<b>SIC Code:</b>	<b>3316</b>
<b>Operation Permit No.:</b>	<b>MSOP 167-V039-00120</b>
<b>Operation Permit Iss. Date:</b>	<b>July 19, 1999</b>
<b>Significant Source Mod. No.:</b>	<b>167-11837-00120</b>
<b>Permit Reviewer:</b>	<b>Rob Harmon</b>

On September 7, 2000, Vigo County Air Pollution Control (VCAPC) had a second notice published in the Terre Haute Tribune-Star, Terre Haute, Indiana, stating that Heartland Steel, Inc. had applied for a Significant Source Modification to construct and operate space heating units, emergency generators, and a pickle line scale breaker. The notice also stated that VCAPC proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On October 10, 2000, Heartland Steel, Inc. submitted comments on the proposed Significant Source Modification. The summary of the comments is as follows:

**Comment 1:**

Regarding the descriptive changes that appear in Condition D.1.1. Heartland Steel conducted performance tests on the Cold Mill Exhaust Progressive Purification System and submitted the results of this testing to VCAPC on August 25, 2000. Based on the fact that during the test the cold mill achieved a maximum hourly processing rate of 208 tons per hour. Heartland believes this should translate to a nominal maximum rate of 200 tons per hour (400,000 pounds per hour), instead of the 320,000 pounds per hour that is listed in this descriptive change.

**Response to Comment 1:**

Since the maximum production rates contained in condition D.1.1 are descriptive changes only, and since the emission calculations on that Cold Rolling Mill were performed based on control efficiency instead of production rates, this request can be accommodated. There would not be a change in potential emissions. Condition D.1.1(b) is updated as follows:

- (b) The Maximum Hourly production rates for several processes were incorrect in the initial permit. These are being updated to: Pickle Line - 800,000 pounds of steel per hour (from 289,665 pounds of steel per hour); Galvanizing Line - 140,000 pounds of steel per hour (from 96,160 pounds of steel per hour); and Cold Reversing Mill - ~~320,000~~ 400,000 pounds of steel per hour (from 237,000 pounds of steel per hour). These capacity changes affect the particulate matter emission limitations established by 326 IAC 6-3. The calculation methods are presented in Conditions D.1.1, and D.4.1 of the previous MSOP.

**Comment 2:**

Regarding the nested source determination: Heartland Steel (HSI) is finalizing its response to the EPA PSD determination made by Region V, USEPA. HSI does not agree with the nesting of the Batch Anneal, Temper Mill, and Reversing Cold Mill. HSI believes that the US EPA Region V PSD determination for HSI is a site-specific determination that has broad application by expanding the 1997 Protec PSD to include the cold reduction of purchased steel and cold tempering of purchased steel.

HSI believes that its PSD Determination from US EPA Region V is flawed because Region V failed to follow US EPA Headquarters guidance letters and US EPA Headquarters directives. Region V failed to follow US EPA Headquarters guidance letters when it did not go beyond the two-digit SIC code and did not evaluate the individual processes. Region V failed to follow US EPA Headquarters directives when it failed to utilize the North American Industrial Classification System when making HSI's site specific PSD Determination.

#### **Response to Comment 2:**

At this time VCAPC only has the determination that Region V made as the basis to ascertain how to categorize Heartland Steel with regard to the PSD requirements. As has been discussed with Heartland Steel's representatives, this modification (including the "nesting" of all processes within the 2-digit SIC of 33) has been prepared following the guidance of that determination. At this time no changes can be made in the structure of this source categorization. However, should Heartland Steel, at some time in the future, convince the US EPA to change their opinion on this matter the permit can be reopened and revised at that time. Until then, as has been agreed upon with Heartland Steel, this Significant Source Modification will not be held up pending any further argument or resolution of this issue.

#### **Comment 3:**

In Condition D.1.7 (Baghouse Inspections) the word "woodworking" should be replaced with the phrase "scale breaking".

#### **Response to Comment 3:**

The condition, as currently worded, obviously contains an incorrect reference. The equipment that is intended to be inspected periodically is used to control emissions from the scale breaker and the suggested change is appropriate. The condition now reads:

##### **D.1.7 Baghouse Inspections**

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An inspection shall be performed each calendar quarter of all bags controlling the ~~woodworking~~ **scale breaking** operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Vigo County Air Pollution Control**

**Technical Support Document (TSD) for a Part 70  
Significant Source Modification.**

**Source Background and Description**

<b>Source Name:</b>	<b>Heartland Steel, Inc.</b>
<b>Source Location:</b>	<b>455 West Industrial Drive, Terre Haute, Indiana 47802</b>
<b>County:</b>	<b>Vigo County</b>
<b>SIC Code:</b>	<b>3316</b>
<b>Operation Permit No.:</b>	<b>MSOP 167-V039-00120</b>
<b>Operation Permit Issuance Date:</b>	<b>July 19, 1999</b>
<b>Significant Source Modification No.:</b>	<b>167-11837-00120</b>
<b>Permit Reviewer:</b>	<b>Rob Harmon</b>

The Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC) have reviewed a modification application from Heartland Steel, Inc. relating to the construction of the following emission units and pollution control devices:

- (a) Seven (7) space heating units, with a maximum capacity of 6.6 million BTU per hour each, fired on either natural gas or propane.
- (b) Miscellaneous space heating with an estimated combined maximum capacity of 3 million BTU per hour, fired on either natural gas or propane.
- (c) Two (2) diesel fired emergency generators, with a maximum input capacity of 69.7 gallons per hour (output rating 1447 Bhp).
- (d) Pickle Line Scale Breaker, controlled by a Wheelabrator baghouse (model 120 Series 6P), and exhausting to stack 007.

In addition, the address of the Heartland Steel, Inc. is being changed from 70 West Harlan Drive to 445 West Industrial Drive because Industrial Drive has now been extended to the Heartland Steel property. They have requested this change.

The Maximum Hourly production rates for several processes were incorrect in the initial permit. These are being updated to: Pickle Line - 800,000 pounds of steel per hour (from 289,665 pounds of steel per hour); Galvanizing Line - 140,000 pounds of steel per hour (from 96,160 pounds of steel per hour); and Cold Reversing Mill - 320,000 pounds of steel per hour (from 237,000 pounds of steel per hour). These capacity changes affect the particulate matter emission limitations established by 326 IAC 6-3. The calculation methods are presented in Conditions D.1.1, and D.4.1 of the previous MSOP.

The use of the Galvanizing Line as a Continuous Annealing line has been considered and is being added as a alternate operation method.

The propane use limitation, which was determined to not be needed to avoid the PSD requirements, is being removed. The associated reporting form is also no longer required to be submitted as before and the recordkeeping and reporting requirements that were solely based on

this limitation have been removed. The Conditions of the MSOP that are removed are D.1.2, D.2.2, and D.4.3.

~~D.1.2 Propane Use Limitation [326 IAC 2-2]~~

~~Units GI-01, GI-02, GI-03, GI-04, BA01 through BA09, PB1, PB2, and PB3 shall be limited to 5.42 million gallons of propane combined during any 12-month period, rolled monthly. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.~~

~~D.2.2 Propane Use Limitation [326 IAC 2-2]~~

~~Units GI-01, GI-02, GI-03, GI-04, BA01 through BA09, PB1, PB2, and PB3 shall be limited to 5.42 million gallons of propane combined during any 12-month period, rolled monthly. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.~~

~~D.4.3 Propane Use Limitation [326 IAC 2-2]~~

~~Units GI-01, GI-02, GI-03, GI-04, BA01 through BA09, PB1, PB2, and PB3 shall be limited to 5.42 million gallons of propane combined during any 12-month period, rolled monthly. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.~~

## History

On January 25, 2000, Heartland Steel, Inc. submitted an application to the OAM and VCAPC requesting to add additional space heating and emergency electric generation units to their existing plant. On February 28, 2000, in a meeting with IDEM-OAM, Heartland Steel presented an argument as to why they felt their operations had been inappropriately been classified as one of the 28 listed source categories that have a lower PSD threshold. In a letter dated May 19, 2000 IDEM-OAM requested US EPA Region 5 consider this request. They responded in a letter dated July 12, 2000 that outlined the nested source idea that is presented in this TSD and associated Significant Source Modification.

Previously, on March 27, 2000, this modification had been made available to the public for 30 days for comment. The only comments which were received came from Heartland Steel on April 25, 2000. The comments from them included all of the arguments for changing the way the source was compared to the PSD threshold. Since the US EPA Region 5 ruling allowed for the removal of several limitations which had been previously proposed it was determined that the changes were too significant to address in an addendum only. Therefore, the entire modification has been updated and will go through a second public comment period.

Heartland Steel was issued an MSOP permit on July 19, 1999 pursuant to the transition procedures that apply to new sources that are subject to the Part 70 requirements. Heartland Steel had to submit a Part 70 application within 1 year as part of that initial permit. They submitted their Part 70 application on July 19, 2000.

## Enforcement Issue

- (a) IDEM-OAM and VCAPC are aware that some of the equipment has been constructed and operated prior to receipt of the proper permit.
- (b) IDEM-OAM and VCAPC are reviewing this matter and will take appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

## Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and

additional information submitted by the applicant.

An application for the purposes of this review was received on January 25, 2000. Additional information was received on February 28, 2000 and April 25, 2000.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (Pages 1 through 27).

### Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	77.42
PM-10	78.12
SO <sub>2</sub>	5.19
VOC	1.70
CO	21.67
NO <sub>x</sub>	50.34

### Justification for Modification

The place holding MSOP is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5 because the potential emissions are above 25 tons per year and they are changing a limitation that was not based directly on a rule, but was in fact intended to avoid a rule applicability. This approval is to construct and operate.

### County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	maintenance
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Vigo County has been classified as attainment or unclassifiable for all other pollutants.

Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (c) Heartland Steel is not located in the small portion of Vigo County that is still subject to the more stringent opacity limitations.

### Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	88.73
PM-10	88.73
SO <sub>2</sub>	9.98
VOC	22.55
CO	79.88
NO <sub>x</sub>	91.8

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories (Iron and Steel Mill Plants).
- (b) These emissions are based upon the previous MSOP.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Modification (After Control)	2.25	2.94	5.19	1.70	21.67	50.34	
PSD Threshold*	250	250	250	250	250	250	NA
Major Mod (PSD)?	N	N	N	N	N	N	N

\* Since none of the new equipment covered by this modification is part of the nested source the appropriate threshold is 250 tons per year.

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### Source Status (After Modification and Removal of Unnecessary Limitations)

In a letter dated July 12, 2000, US EPA Region V ruled that a source such as Heartland Steel should be considered as having a nested source when determining PSD applicability. The entire operation is compared to the 250 ton per year limitation for sources that are not in one of



the listed categories. The nested source portion only would be considered as a listed source (for the Iron and Steel Mill Plant category) and would therefore be compared to the 100 ton per year threshold. The operations are divided up based on their SIC Code. All operations with a two-digit SIC Code of 33 are considered as part of the nested source. The operations that fall into that two-digit SIC Code are: Batch Annealing (SIC 3398); Reversing Cold Rolling Mill (SIC 3316); and the Temper Mill (SIC 3398). The tables below show the source status after all the changes this modification considers:

#### Entire Source

	Pollutant							
	PM	PM10	SO2	NOx	VOC	CO	HCL	Chromium
GL strip dryer	0.04	0.07	0.09	1.34	0.05	0.74		
GL direct fire	1.30	1.51	2.08	41.20	1.09	16.67		
GL radiant heat	0.38	0.44	0.61	12.01	0.32	4.86		
GL chrom spray dryer	0.04	0.07	0.09	1.34	0.05	0.74		
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Package Boilers	2.88	3.34	4.62	91.35	2.42	36.95		
PL HCL Emissions*	9.86	9.86					9.86	
GL spray cleaning*	0.70	0.70						
GL induction melting	2.23	2.23						
GL chromate spray	1.23	1.23						1.23
Reversing Cold Mill*	48.81	48.81			14.64			
Temper Mill	19.10	19.10			2.68			
Space Heaters	0.88	1.54	2.12	30.96	1.11	17.00		
Other Heating	0.06	0.10	0.14	2.01	0.07	0.53		
Generators	0.51	0.51	2.93	17.36	0.51	4.15		
Scale Breaker	0.38	0.38						
Total PTE (After Cont)	89.42	91.66	15.16	233.76	24.24	101.49	9.86	1.23

\* - Indicates some form of limitation exists. Those limitations are: the Pickle Line Scrubber System must be in operation at all times; the Galv Line Spray Cleaning mist elim must be in operation at all times; and the Reversing Cold Mill progressive purification system must be in operation at all times.

Since no pollutant exceeds the 250 ton per year threshold, the source will still be considered as an existing minor source with regard to the PSD requirements.

#### Nested Source

	Pollutant							
	PM	PM10	SO2	NOx	VOC	CO	HCL	Chromium
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Reversing Cold Mill*	48.81	48.81			14.64			
Temper Mill	19.10	19.10			2.68			
Total PTE (After Cont)	68.94	69.70	2.48	36.19	18.62	19.87	0.00	0.00

\* - Indicates some form of limitation exists. This limitation is: the Reversing Cold Mill progressive purification system must be in operation at all times.

Since no pollutant exceeds the 100 ton per year threshold, the nested source will still be considered as an existing minor source with regard to the PSD requirements.

#### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

### **State Rule Applicability - Individual Facilities**

There are no State Rules that apply specifically to these facilities.

### **Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

### **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 167-11837-00120.

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Space Heating - Natural Gas Combustion

Using SCC 1-03-006-03

Seven (7) Units rated at 6.6 MMBTU/Hr each

Heat Input Capacity  
MMBtu/hrPotential Throughput  
MMCF/yr

46.2

404.7

## Pollutant

Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	SO2 0.6	NOx 100.0 **see below	VOC 5.5	CO 84.0
Potential Emission in tons/yr	0.38	1.54	0.12	20.24	1.11	17.00

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Space Heating - Propane Combustion  
 Less than 10 MMBTU per hour Units  
 Seven (7) Units rated at 6.6 MMBTU/Hr each

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 kgals/year

SO<sub>2</sub> Emission factor = 0.10 x S

S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

46.20

4423.08

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	0.4	0.4	1.0 (0.10S)	14.0	0.5 **TOC value	1.9
Potential Emission in tons/yr	0.88	0.88	2.12	30.96	1.11	4.20

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

## Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.38	1.54	0.12	20.24	1.11	17.00
Heaters using Propane	0.88	0.88	2.12	30.96	1.11	4.20
Worst Case	0.88	1.54	2.12	30.96	1.11	17.00

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Space Heating - Natural Gas Combustion  
 Using SCC 1-03-006-03  
 Miscellaneous Space Heating (All Assumed to be less than 0.3 MMBTU/Hr)

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

3.0

26.3

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	94.0 **see below	5.5	40.0
Potential Emission in tons/yr	0.02	0.10	0.01	1.24	0.07	0.53

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Space Heating - Propane Combustion  
 Less than 10 MMBTU per hour Units  
 Miscellaneous Space Heating (All Assumed to be less than 0.3 MMBTU/Hr)

Heat Input Capacity                      Potential Throughput                      SO<sub>2</sub> Emission factor = 0.10 x S  
 MMBtu/hr                                      kgals/year                                      S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

3.00                      287.21

Emission Factor in lb/kgal	Pollutant					
	PM* 0.4	PM10* 0.4	SO <sub>2</sub> 1.0 (0.10S)	NO <sub>x</sub> 14.0	VOC 0.5 **TOC value	CO 1.9
Potential Emission in tons/yr	0.06	0.06	0.14	2.01	0.07	0.27

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

## Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.02	0.10	0.01	1.24	0.07	0.53
Heaters using Propane	0.06	0.06	0.14	2.01	0.07	0.27
Worst Case	0.06	0.10	0.14	2.01	0.07	0.53

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Large (>600 HP) Recipricating Internal Combustion Engines  
 Two units, each rated at 1447 Bhp (69.7 gallons per hour) fired on diesel fuel

#### A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity  
MM Btu/hr

Percent Sulfur

19.5

0.5

Emission Factor in lb/MMBtu	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.1	0.1	0.51 <i>1.01*S</i>	3.20	0.1	0.85
Potential Emission in tons/yr	0.49	0.49	2.46	15.61	0.44	4.15

#### B. Emissions calculated based on output rating (hp)

Heat Input Capacity  
Horsepower (hp)

Potential Throughput  
hp-hr/yr

2894.0

1447000.0

Emission Factor in lb/hp-hr	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	0.0007	0.0007	0.0040 <i>0.00809*S</i>	0.0240	0.0007	0.0055
Potential Emission in tons/yr	0.51	0.51	2.93	17.36	0.51	3.98

#### Methodology

Potential Throughput (hp-hr/yr) = hp \* 500 hr/yr [since emergency use only]

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] \* 500 hr/yr / (2,000 lb/ton) [since emergency use only]

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

\*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Pickle Line Scale Breaker

17.25	pounds per hour particulate matter (and PM10) emission rate from process
75.56	tons per year potential emissions of PM and PM10 (Before Control)
99.50%	Estimated percent control efficiency of baghouse
0.38	tons per year potential emissions of PM and PM10 (After Control)



**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Total Project PTE  
Before any Limitations (in tons per year)

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Space Heaters	0.88	1.54	2.12	30.96	1.11	17.00
Other Heating	0.06	0.10	0.14	2.01	0.07	0.53
Generators	0.51	0.51	2.93	17.36	0.51	4.15
Scale Breaker	75.56	75.56				
Increased Capacity in Galv Line	0.42	0.42				
<b>Total</b>	<b>77.42</b>	<b>78.12</b>	<b>5.19</b>	<b>50.34</b>	<b>1.70</b>	<b>21.67</b>

Total Project PTE  
After Limitations (in tons per year)

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Space Heaters	0.88	1.54	2.12	30.96	1.11	17.00
Other Heating	0.06	0.10	0.14	2.01	0.07	0.53
Generators	0.51	0.51	2.93	17.36	0.51	4.15
Scale Breaker	0.38	0.38				
Increased Capacity in Galv Line	0.42	0.42				
<b>Total</b>	<b>2.25</b>	<b>2.94</b>	<b>5.19</b>	<b>50.34</b>	<b>1.70</b>	<b>21.67</b>

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Strip Dryer Furnace - Natural Gas Combustion  
 Using SCC 1-03-006-03  
 rated at 2.0 MMBTU/Hr

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

2.0

17.5

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.02	0.07	0.01	0.44	0.05	0.74

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Strip Dryer Furnace - Propane Combustion  
 Less than 10 MMBTU per hour Units  
 rated at 2.0 MMBTU/Hr

Heat Input Capacity                      Potential Throughput                      SO<sub>2</sub> Emission factor = 0.10 x S  
 MMBtu/hr                                      kgals/year                                      S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

2.0                                      191.48

Emission Factor in lb/kgal	Pollutant					
	PM* 0.4	PM10* 0.4	SO <sub>2</sub> 1.0 (0.10S)	NO <sub>x</sub> 14.0	VOC 0.5 **TOC value	CO 1.9
Potential Emission in tons/yr	0.04	0.04	0.09	1.34	0.05	0.18

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

### Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.02	0.07	0.01	0.44	0.05	0.74
Heaters using Propane	0.04	0.04	0.09	1.34	0.05	0.18
Worst Case	0.04	0.07	0.09	1.34	0.05	0.74

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Direct Fire Zone Furnace - Natural Gas Combustion  
 Using SCC 1-03-006-02  
 rated at 45.3 MMBTU/Hr

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

45.3

396.8

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.38	1.51	0.12	9.92	1.09	16.67

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Direct Fire Zone Furnace - Propane Combustion  
 Greater than 10 MMBTU per hour Units  
 rated at 45.3 MMBTU/Hr

Heat Input Capacity                      Potential Throughput                      SO<sub>2</sub> Emission factor = 0.10 x S  
 MMBtu/hr                                      kgals/year                                      S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

45.3                                      4336.92

Emission Factor in lb/kgal	Pollutant					
	PM* 0.6	PM10* 0.6	SO <sub>2</sub> 1.0 (0.10S)	NO <sub>x</sub> 19.0	VOC 0.5 **TOC value	CO 3.2
Potential Emission in tons/yr	1.30	1.30	2.08	41.20	1.08	6.94

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

### Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.38	1.51	0.12	9.92	1.09	16.67
Heaters using Propane	1.30	1.30	2.08	41.20	1.08	6.94
Worst Case	1.30	1.51	2.08	41.20	1.09	16.67

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Radiant Heat Tube Furnace - Natural Gas Combustion  
 Using SCC 1-03-006-02  
 rated at 13.2 MMBTU/Hr

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

13.2

115.6

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.11	0.44	0.03	2.89	0.32	4.86

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Radiant Heat Tube Furnace - Propane Combustion  
 Greater than 10 MMBTU per hour Units  
 rated at 13.2 MMBTU/Hr

Heat Input Capacity                      Potential Throughput                      SO<sub>2</sub> Emission factor = 0.10 x S  
 MMBtu/hr                                      kgals/year                                      S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

13.2                      1263.74

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	0.6	0.6	1.0 (0.10S)	19.0	0.5 **TOC value	3.2
Potential Emission in tons/yr	0.38	0.38	0.61	12.01	0.32	2.02

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

### Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.11	0.44	0.03	2.89	0.32	4.86
Heaters using Propane	0.38	0.38	0.61	12.01	0.32	2.02
Worst Case	0.38	0.44	0.61	12.01	0.32	4.86

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Chromate Spray Dryer Furnace - Natural Gas Combustion  
 Using SCC 1-03-006-03  
 rated at 2.0 MMBTU/Hr

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

2.0

17.5

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.02	0.07	0.01	0.44	0.05	0.74

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.



**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Galvanizing Line Chromate Spray Dryer Furnace - Propane Combustion  
 Less than 10 MMBTU per hour Units  
 rated at 2.0 MMBTU/Hr

Heat Input Capacity                      Potential Throughput                      SO<sub>2</sub> Emission factor = 0.10 x S  
 MMBtu/hr                                      kgals/year                                      S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

2.0                                      191.48

Emission Factor in lb/kgal	Pollutant					
	PM* 0.4	PM10* 0.4	SO <sub>2</sub> 1.0 (0.10S)	NO <sub>x</sub> 14.0	VOC 0.5 **TOC value	CO 1.9
Potential Emission in tons/yr	0.04	0.04	0.09	1.34	0.05	0.18

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

### Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.02	0.07	0.01	0.44	0.05	0.74
Heaters using Propane	0.04	0.04	0.09	1.34	0.05	0.18
Worst Case	0.04	0.07	0.09	1.34	0.05	0.74

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Batch Annealing Furnaces - Natural Gas Combustion  
 Using SCC 1-03-006-03  
 nine (9) units rated at 6.0 MMBTU/Hr each

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 MMCF/yr

54.0

473.0

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.45	1.80	0.14	11.83	1.30	19.87

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

## Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

**Existing Batch Annealing Furnaces - Propane Combustion**

Less than 10 MMBTU per hour Units

nine (9) units rated at 6.0 MMBTU/Hr each

Heat Input Capacity  
MMBtu/hrPotential Throughput  
kgals/yearSO<sub>2</sub> Emission factor = 0.10 x SS = Sulfur content = 9.60 grains/100ft<sup>3</sup>54.05169.84

Emission Factor in lb/kgal	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
	0.4	0.4	1.0 (0.10S)	14.0	0.5 **TOC value	1.9
Potential Emission in tons/yr	1.03	1.03	2.48	36.19	1.29	4.91

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

**Methodology**

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.45	1.80	0.14	11.83	1.30	19.87
Heaters using Propane	1.03	1.03	2.48	36.19	1.29	4.91
Worst Case	1.03	1.80	2.48	36.19	1.30	19.87

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Existing Package Boilers - Natural Gas Combustion

Using SCC 1-03-006-02

three (3) units rated at 33.48 MMBTU/Hr each

Heat Input Capacity  
MMBtu/hrPotential Throughput  
MMCF/yr

100.44

879.9

## Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	50.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.84	3.34	0.26	22.00	2.42	36.95

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

HAPs not calculated since so low for natural gas combustion.

**Heartland Steel, Inc.**  
 445 West Industrial Drive, Terre Haute, Indiana 47802  
 SSM 167-11837-00120  
 Reviewer: Rob Harmon  
 Date Received: January 25, 2000

Existing Package Boilers - Propane Combustion  
 Greater than 10 MMBTU per hour Units  
 three (3) rated at 33.48 MMBTU/Hr each

Heat Input Capacity  
 MMBtu/hr

Potential Throughput  
 kgals/year

SO<sub>2</sub> Emission factor = 0.10 x S

S = Sulfur content = 9.60 grains/100ft<sup>3</sup>

100.44

9615.90

Emission Factor in lb/kgal	Pollutant					
	PM* 0.6	PM10* 0.6	SO <sub>2</sub> 1.0 (0.10S)	NO <sub>x</sub> 19.0	VOC 0.5 **TOC value	CO 3.2
Potential Emission in tons/yr	2.88	2.88	4.62	91.35	2.40	15.39

\*PM emission factor is filterable PM only. PM10 emission factor is assumed to be the same as PM based on a footnote in Table 1.5-1, therefore PM10 is filterable only as well.

\*\*The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

## Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (Supplement B 10/96), Table 1.5-1 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

The worst case for each pollutant was highlighted for easier identification. The emissions are summarized below.

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
All emissions in tons per year						
Heaters using Natural Gas	0.84	3.34	0.26	22.00	2.42	36.95
Heaters using Propane	2.88	2.88	4.62	91.35	2.40	15.39
Worst Case	2.88	3.34	4.62	91.35	2.42	36.95

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Existing Pickle Line HCl Emission Calculations

Pickle Line Capacity: 800,000 pounds of steel per hour

Controlled by a Wet Scrubber

13000 Fume Exhaust and wet scrubber System rating (acfm)

99.0% Scrubber Design Efficiency (HCl removal)

225.1 Scrubber Inlet HCl rate (lbs per hour) [provided by manufacturer]

986 Potential Scrubber Emissions Before Control (TPY HCl, part aerosol and HAP, assume PM=PM10)

Calculated as pounds per hour \*8760 hours per year/2000 pounds per ton

9.86 Potential Scrubber Emissions After Control (TPY HCl, part aerosol and HAP, assume PM=PM10)

Calculated as before control \* (1- fraction controlled)

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Existing Galvanizing Line Spray Cleaning Section

Galvanizing Line Capacity: 140,000 pounds of steel per hour

Controlled by a Mist Eliminator

8500 Fume Exhaust and Mist Eliminator rating (acfm)

99.0% Mist Eliminator Design Efficiency (part. removal)

0.02 Mist Eliminator Outlet Concentration (grams per second) [Provided by manufacturer]

0.695 Potential Particulate Emissions After Control (TPY, assume PM=PM10 for this process)

calculated as  $\text{grams/sec} * 0.002205 \text{ pound per gram} * 60 \text{ sec/min} * 60 \text{ min/hr} * 8760 \text{ hr/yr} / 2000 \text{ lbs/ton}$ 

69.5 Potential Particulate Emissions Before Control (TPY, assume PM=PM10 for this process)

calculated as  $\text{after control TPY} / (1 - \text{control fraction})$

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

Existing Galvanizing Line Chromate Spray

Galvanizing Line Capacity: 140,000 pounds of steel per hour

Purpose of the spray is to prevent discoloration and oxidation of the strip.

The spray is 3% to 5% chromic acid (Oakite Brand) solution.

Max. application rate is 1 mg per square foot

At 500 feet per min with a width of 74 inches, this is equal to 185000 mg per hour

or 185 grams per hour or 0.408 pounds per hour.

This is very close to the 0.37 pounds of chromic acid per hour they reported as their maximum use rate.

Only emission estimates I have are from the AK Steel construction permit.

0.161 Tons per year chromium compounds (after control)

183.6 tons per hour AK Steel max operating rate

70 tons per hour Heartland Steel max operating rate

0.95 assumed fraction controlled by AK Steel scrubber system

3.22 tons per year potential before control for AK Steel

1.228 tons per year potential for Heartland (assuming linear correlation)

That emission rate would be for PM, PM10 and Chromium Compounds



**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

## Existing Reversing Cold Mill

Reversing Cold Mill Capacity: 320,000 pounds of steel per hour

Controlled by a Progressive Purification System (Mist Eliminator)

130000 Fume Exhaust and Progressive Purification System rating (acfm)

99.0% Progressive Purification Design Efficiency (Part and VOC)

0.01 Progressive Purification Outlet Part rate (grains per dscf) [provided by manufacturer]

48.81 Potential Progressive Purification System Part. Emissions After Control (TPY, assume PM=PM10)

Calculated as scfm outlet air \* grain/dscf \* 60 min/hr \* 8760 hours per year / (2000 pounds per ton \* 7000 grain/pound)

4881 Potential Progressive Purification System Part. Emissions Before Control (TPY, assume PM=PM10)

Calculated as after control / (1- fraction controlled)

0.003 Progressive Purification Outlet VOC rate (grains per dscf) [provided by manufacturer]

14.64 Potential Progressive Purification System VOC Emissions After Control (TPY)

Calculated as scfm outlet air \* grain/dscf \* 60 min/hr \* 8760 hours per year / (2000 pounds per ton \* 7000 grain/pound)

1464 Potential Progressive Purification System VOC Emissions Before Control (TPY)

Calculated as after control / (1- fraction controlled)

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

## Existing Temper Mill

On March 31, 1998 Nucor Steel in Crawfordsville tested a similar piece of equipment. The results of this test will be used to estimate the potential emissions from Heartland's Temper Mill.

0.218 Average PM and PM10 emission rate during the test (pounds per hour)

0.95 Assumed fraction removed by the mist elimination system on Nucor's process

2000 Pounds per ton (conversion factor)

8760 Hours per year (conversion factor)

4.36 Calculated pounds per hour before control (tested emission rate / (1-fraction controlled))

19.10 Calculated tons per year @8760 (for PM and PM10)

0.140 ratio of VOC emissions to PM emissions from the AK Steel construction permit

2.68 Calculated tons per year @8760 (for VOC)

## Assumptions:

Nucor Steel's Mist eliminator is 95% efficient

The AK Steel ratio between PM and VOC is valid in this case

PM is assumed to be equal to PM10 for this operation (based on test results)

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

## Establish Entire Source PTE before Controls or Limitations

(Entire Source is not considered to be a listed source category, so it would be compared to a 250 tpy threshold)

Some of these emissions estimates are from the previous MSOP (167-V039-00120, issued July 19, 1999), but not all of them were completely updated before. So all the calculations for these existing units have been included in this Appendix as well.

	Pollutant							Chromium
	PM	PM10	SO2	NOx	VOC	CO	HCL	
GL strip dryer	0.04	0.07	0.09	1.34	0.05	0.74		
GL direct fire	1.30	1.51	2.08	41.20	1.09	16.67		
GL radiant heat	0.38	0.44	0.61	12.01	0.32	4.86		
GL chrom spray dryer	0.04	0.07	0.09	1.34	0.05	0.74		
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Package Boilers	2.88	3.34	4.62	91.35	2.42	36.95		
PL HCL Emissions	985.94	985.94					985.94	
GL spray cleaning	69.54	69.54						
GL induction melting	2.23	2.23						
GL chromate spray	1.23	1.23						1.23
Reversing Cold Mill	4880.57	4880.57			1464.17			
Temper Mill	19.10	19.10			2.68			
Space Heaters	0.88	1.54	2.12	30.96	1.11	17.00		
Other Heating	0.06	0.10	0.14	2.01	0.07	0.53		
Generators	0.51	0.51	2.93	17.36	0.51	4.15		
Scale Breaker	75.56	75.56						
Total PTE (Bef Cont)	6041.28	6043.53	15.16	233.76	1473.77	101.49	985.94	1.23

So, without any limitations this source would be major with regard to PSD for PM, PM10, VOC. However, HSI has already received some limitations from the previous permitting.

## Establish Entire Source PTE after Required Controls and Limitations

	Pollutant							Chromium
	PM	PM10	SO2	NOx	VOC	CO	HCL	
GL strip dryer	0.04	0.07	0.09	1.34	0.05	0.74		
GL direct fire	1.30	1.51	2.08	41.20	1.09	16.67		
GL radiant heat	0.38	0.44	0.61	12.01	0.32	4.86		
GL chrom spray dryer	0.04	0.07	0.09	1.34	0.05	0.74		
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Package Boilers	2.88	3.34	4.62	91.35	2.42	36.95		
PL HCL Emissions*	9.86	9.86					9.86	
GL spray cleaning*	0.70	0.70						
GL induction melting	2.23	2.23						
GL chromate spray	1.23	1.23						1.23
Reversing Cold Mill*	48.81	48.81			14.64			
Temper Mill	19.10	19.10			2.68			
Space Heaters	0.88	1.54	2.12	30.96	1.11	17.00		
Other Heating	0.06	0.10	0.14	2.01	0.07	0.53		
Generators	0.51	0.51	2.93	17.36	0.51	4.15		
Scale Breaker	0.38	0.38						
Total PTE (After Cont)	89.42	91.66	15.16	233.76	24.24	101.49	9.86	1.23

\* - Indicates some form of limitation exists. Those limitations are: the Pickle Line Scrubber System must be in operation at all times; the Galv Line Spray Cleaning mist elim must be in operation at all times; and the Reversing Cold Mill progressive purification system must be in operation at all times.

**Heartland Steel, Inc.**

445 West Industrial Drive, Terre Haute, Indiana 47802

SSM 167-11837-00120

Reviewer: Rob Harmon

Date Received: January 25, 2000

**Establish Nested Source PTE before Controls or Limitations**

(Nested Source is considered to be a listed source category (Iron and Steel Mill Plants),  
so it would be compared to a 100 tpy threshold)

In this case only those operations which have SIC Codes starting with 33 are included in the "Nested Source".

Some of these emissions estimates are from the previous MSOP (167-V039-00120, issued July 19, 1999), but not all of them were completely updated before. So all the calculations for these existing units have been included in this Appendix as well.

	Pollutant							
	PM	PM10	SO2	NOx	VOC	CO	HCL	Chromium
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Reversing Cold Mill	4880.57	4880.57			1464.17			
Temper Mill	19.10	19.10			2.68			
Total PTE (Bef Cont)	4900.70	4901.47	2.48	36.19	1468.15	19.87	0.00	0.00

So, without any limitations this source would be major with regard to PSD for PM, PM10, VOC. However, HSI has already received some limitations from the previous permitting.

**Establish Entire Source PTE after Required Controls and Limitations**

	Pollutant							
	PM	PM10	SO2	NOx	VOC	CO	HCL	Chromium
BA line furnaces	1.03	1.80	2.48	36.19	1.30	19.87		
Reversing Cold Mill*	48.81	48.81			14.64			
Temper Mill	19.10	19.10			2.68			
Total PTE (After Cont)	68.94	69.70	2.48	36.19	18.62	19.87	0.00	0.00

\* - Indicates some form of limitation exists. This limitation is: the Reversing Cold Mill progressive purification system must be in operation at all times.

Clearly, both the entire source and the nested source would be considered to be a synthetic minor with regard to PSD.